

AMENDMENTS TO THE CLAIMS

1-121. (canceled)

122. (previously presented): A microdevice, which microdevice comprises:

- a) a substrate;
- b) a photorecognizable coding pattern on said substrate; and
- c) a binding partner on a surface of the microdevice that is capable of binding to a moiety to be manipulated,

wherein said photorecognizable coding pattern comprises a hole not penetrating through the entire depth of said substrate,

and said microdevice has dimensions from about 1 to about 500 microns, and does not comprise an anodized metal surface layer;

wherein the substrate comprises a silicon layer and a metal layer;
and the metal layer comprises a patterned magnetic material.

123. (previously presented): The microdevice of claim 122, wherein the magnetic material comprises nickel.

124. (previously presented): The microdevice of claim 122, wherein the magnetic material comprises CoTaZr alloy.

125. (previously presented): The microdevice of claim 122, wherein the patterned magnetic material is an encoding feature.

126. (previously presented): The microdevice of claim 122, wherein the substrate comprises a silicon layer and a metal layer, and said silicon is silicon dioxide or silicon nitride.

127. (previously presented): The microdevice of claim 122, wherein the photorecognizable coding pattern is in an encoding layer, and the metal layer comprising a patterned magnetic material is a different layer.

128. (previously presented): The microdevice of claim 126, wherein the metal layer comprises a magnetic alloy.

129. (previously presented): The microdevice of claim 126, wherein the metal layer comprises nickel metal or CoTaZr (Cobalt-Tantalum-Zirconium) alloy.

130. (previously presented): The microdevice of claim 126, wherein the silicon is silicon dioxide.

131. (previously presented): The microdevice of claim 126, wherein the thickness of the substrate is from about 1 micron to about 10 microns.

132. (previously presented): The microdevice of claim 130, wherein the substrate is a rectangle having a surface area from about 10 squared-microns to about 10,000 squared-microns.

133. (previously presented): A microdevice, which microdevice comprises:

- a) a substrate;
- b) a photorecognizable coding pattern on said substrate; and
- c) a binding partner that is capable of binding to a moiety to be manipulated, wherein the binding partner is coated on a surface of the microdevice;

wherein said photorecognizable coding pattern comprises a hole not penetrating through the entire depth of said substrate,

and wherein said binding partner comprises a cell, a cellular organelle, a virus, or an antibody,

and said microdevice has dimensions from about 1 to about 500 microns, and does not comprise an anodized metal surface layer;

wherein the substrate comprises a silicon layer and a metal layer

wherein the metal layer comprises nickel metal or CoTaZr (Cobalt-Tantalum-Zirconium) alloy.

134. (previously presented): The microdevice of claim 133, further comprising a detectable marker or a molecular tag.

135. (currently amended): The microdevice of ~~claim 133~~ claim 134, wherein the detectable marker is a dye, a radioactive substance or a fluorescent substance.

136. (currently amended): A kit for manipulating a moiety, which kit comprises:

- a) the microdevice of claim 133, and
- b) a chip on which ~~a moiety microdevice complex~~ the microdevice can be manipulated when the microdevice is coupled to a moiety to be manipulated.

137. (previously presented): An array for detecting moieties, which array comprises a plurality of microdevices placed or immobilized on a surface, wherein each of said microdevices is a microdevice of claim 133.

138. (previously presented): The microdevice of claim 133, wherein the thickness of the substrate is from about 1 to about 200 microns.

139. (previously presented): The microdevice of claim 133, wherein the thickness of the substrate is from about 1 to about 50 microns.

140. (previously presented): The microdevice of claim 122, which comprises a plurality of encoding layers.

141. (previously presented): The microdevice of claim 140, wherein the metal layer comprising a patterned magnetic material comprises one encoding layer, and the photorecognizable encoding pattern is comprised in another encoding layer.

142. (previously presented): The microdevice of claim 122, further comprising an orientation marker.

143. (previously presented): The microdevice of claim 140, further comprising an orientation marker.

144. (new): The microdevice of claim 122, wherein the metal layer is a magnetic film.

145. (new): The microdevice of claim 133, wherein the metal layer is a magnetic film.